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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,443	02/28/2002	Alan B. Duell	HES 2002-IP-006493	1856
29920	7590	07/07/2004	EXAMINER	
JOHN W. WUSTENBERG P.O. BOX 1431 DUNCAN, OK 73536			CECIL, TERRY K	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

CD

<b>Office Action Summary</b>	<b>Application No.</b> 10/085,443	<b>Applicant(s)</b> DUELL ET AL.	
	<b>Examiner</b> Mr. Terry K. Cecil	<b>Art Unit</b> 1723	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Objections*

1. Claims 6-7 are objected to because of the following informalities: in line 1 of claim 7, “comprises” should be changed to “comprise” as being the proper verb tense for “steps” and in line 3 of claim 6, “path” should be changed to “paths”. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Montgomery et al. (U.S. 5,775,803), hereinafter “Montgomery”. Montgomery teaches a system and method of forming a slurry of water and cement entering a two-chamber, partitioned vessel 60 from respective lines via a mixing bowl (or mixing head) 55. A discharge line 80 from the vessel is also taught. The slurry overflows from the first chamber to the second by gravity. Each of the lines includes a flow meter and valve in communication with controller 100. The controller ensures a desired ratio input water rate (volumetric rate) and slurry discharge rate (volumetric rate) and also maintains a desired level of slurry in the tank by using a level sensor 65 in the second vessel chamber and controlling the discharge of dry cement [as in claims 1-19]. See the entire document, especially figure 1; col. 3, line 50 to col. 4, line 46; col. 15, lines 7-20; and col. 97, lines 1-23. Concerning the limitation of *volumetric* flow rate, the flows of Montgomery are

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measured and controlled in terms of volume (amount) over time (rate), as evidenced by col. 3, lines 58-59 and in the aforementioned figure and cols.

*Response to Arguments*

4. Applicant's arguments filed 4-20-2004 have been fully considered but they are not persuasive because of the following reasons:

- Applicant argues (page 6) that Montgomery does not teach all the elements of applicant's amended claim 1. However, the examiner contends that such is anticipated by Montgomery's claim 1 reproduced below.

**1. A method for controlling the density of a cement slurry in a system comprising a mix water pump and input line, a dry cement hopper with a regulating valve, and a mixing chamber for receiving and mixing the mix water and cement to produce a cement slurry, comprising the steps of:**

**measuring the slurry discharge rate from the mixing chamber;**

**determining the percentage of mix water by volume in the slurry;**

**regulating the mix water flow rate to the mixing chamber to substantially equal the slurry discharge rate multiplied by the percentage of mix water by volume in the slurry;**

**measuring the slurry level in the mixing chamber;**

**regulating the dry cement flow rate to the mixing chamber; and**

**adjusting the regulating valve based on the measured slurry level to maintain the slurry level in the mixing chamber substantially constant.**

As shown in lines 19-21, Montgomery teaches controlling the volumetric flow rate of one element (dry cement) to maintain a constant level of mixture in the vessel—by adjusting the

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regulating valve of the dry cement hopper (the regulating valve controls the volume of dry cement from the hopper). As shown in lines 11-15, Montgomery teaches controlling the volumetric flow rate of the other of the two elements (water) to maintain a predetermined ratio of the volumetric flow rate of the other element (water) and the volumetric flow rate of the mixture (slurry).

- Applicant argues (page 6) that in his invention the input, measurement, and control function involve volumes and volume ratios only which differs from Montgomery who uses density information (pages 6-9). Firstly, it is pointed out that applicant's claims are not limited to volume and volume ratios *only* since his transitional word "comprising" is open-ended. Secondly, density measurements are not required by the scope of Montgomery's claim 1, as shown above (density measurements are claimed in his claim 2, such that claim 1 must be broader in scope).
- As for his system claims, it is pointed out that Montgomery teaches all the necessary elements—flow meters, level sensor, valves, vessel, etc—including a control unit having the ability to receive signals from the flow meter and level sensor and in response thereto, send a signal to the valve to control the volumetric flow rate of the second element to maintain a constant level of the mixture in the vessel, and to control the volumetric flow rates of the first element and the discharged mixture to maintain a predetermined ratio of claims 12 and 16, as explained above. As for claim 8, the phrases "for controlling the volumetric flow rate..." is considered an intended use of the valves.

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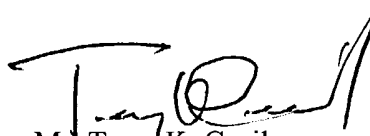
***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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6. Contact Information:

- Examiner Mr. Terry K. Cecil can be reached at (571) 272-1138 at the Carlisle campus in Alexandria, Virginia for any inquiries concerning this communication or earlier communications from the examiner. Note that the examiner is on the increased flextime schedule but can normally be found in the office during the hours of 8:30a to 4:30p, on at least four days during the week M-F.
- Wanda Walker, the examiner's supervisor, can be reached at (571) 272-1151 if attempts to reach the examiner are unsuccessful.
- The Fax number for this art unit for official faxes is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mr. Terry K. Cecil  
Primary Examiner  
Art Unit 1723

TKC  
July 1, 2004